

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed June 16, 2006. Claims 1, 2, 4 – 11 and 13 – 18 remain pending. In particular, Applicants have amended claims 6 and 9. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

Rejections Under 35 U.S.C. §112, Second Paragraph

The Office Action indicates that claim 9 is rejected under 35 U.S.C. 112, second paragraph as lacking in antecedent basis. As set forth above, Applicants have amended claim 9 and respectfully assert that the rejection has been accommodated.

Rejections Under 35 U.S.C. §103

The Office Action indicates that claims 1, 2, 4, 5 and 8 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Henrie*, and that claims 6 and 7 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Henrie* in view of *Le*. The Office Action also indicates that claims 9, 10, 11, 13, 14, 15 and 18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Henrie*, and that claims 16 and 17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Henrie*. Applicants respectfully traverse.

In this regard, Official Notice appears to have been used quite extensively in formulating the pending rejections. However, for at least the following reasons, such Official Notice appears to be improper.

As an initial matter, the MPEP indicates that Official Notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well known. (MPEP 2144.03.A.) The federal courts have interpreted

such to mean that the notice of facts beyond the record, which may be taken by the examiner, must be capable of such instant and unquestionable demonstration as to defy dispute. Such is not the case with the facts alleged in the pending Office Action.

In particular, the Office Action indicates, with respect to the pending claims that:

Henrie fails to teach an internal USB port being operative to communicate information to and from the motherboard via the USB hub. Examiner takes official notice that by moving the USB hub of Henrie to the inside of the computer chassis, the external ports (Figure 1a, item 18) could serve as internal USB ports and thereby support internal USB devices.
(Office Action at page 4).

Applicants traverse this contention (which has been asserted in various forms with respect to each of the pending independent claims) for at least the following three independent reasons. First, the reference asserted in the Office Action (i.e., *Henrie*) teaches away from the contention indicated in the Official Notice. Second, the reference asserted in the Office Action does not contemplate moving of a USB hub to the inside of a computer chassis. And, third, the reference asserted in the Office Action clearly discloses that when the device is moved within a peripheral (e.g., a computer monitor), the external USB ports are still used as external USB ports. Therefore, there is no contemplation of using external USB ports of the disclosed device as internal USB ports as suggested in the contention of the Official Notice.

With respect to the *Henrie* reference “teaching away” from the contention of the Official Notice, *Henrie* discloses a USB repeater that is not configured for mounting within a computer chassis. In this regard, *Henrie* discloses, in relevant part:

The universal serial bus (USB) is a protocol for a serial bus. USB supports data exchange between a host computer and a wide range of simultaneously accessible peripherals. The attached peripherals share USB bandwidth through a host scheduled token based protocol. The USB allows peripherals to be attached, configured, used and detached while the host and other peripherals are in operation.

The USB transfers signal and power over a four wire cable with two wires for power (+5 Volts) and ground and the other two wires for data signaling. The USB in one configuration is 12 megabits per second and supports up to 128 devices. ***One of the purposes behind the universal serial bus is to provide ease of use to add PC peripherals.*** The USB is designed to handle a broad range of devices such as telephones (both analog, digital, and proprietary), modems, printers, mice, joysticks, scanners, keyboards, and tablets. Therefore, removed from the personal computer are the parallel, serial, graphics, modem, sound/game and mouse ports. ***The USB is designed so that external devices, such as a mouse or a keyboard may be correctly detected and properly configured upon attachment.*** Ordinarily, the topology of the USB system is tiered star. At each star is a universal serial bus repeater providing power for the devices, routing of signals in each direction and providing terminations for each line.

The universal serial bus repeater is a device which has one upstream port, a universal serial bus controller, and several downstream ports. The upstream port is toward the host, such as connected to a computer or other data communication device, and the downstream ports is toward a device. The universal serial bus controller performs the following functions: routing of the signals from the upstream port to the downstream ports and from the downstream ports to the upstream port; and error detection and recovery. ***The universal serial bus controller supports two power source modes (bus-powered or self-powered). Ordinarily, if the power required for the downstream ports and embedded functions is equal to or less than the power the bus can supply, the universal serial bus controller can be powered by the bus. If the power required for the downstream ports and embedded functions is more than what the bus can supply, the universal serial bus controller and the downstream ports are self-powered.***

(Henrie at column 1, lines 12 – 55). (Emphasis added).

Based on the foregoing, two distinct aspects of the teachings of *Henrie* are evident.

That is, *Henrie* demonstrates an awareness of using USB ports for connecting to peripheral or external devices, and *Henrie* describes a USB repeater as supporting two power modes.

Clearly, such a device is not configured for moving within a computer chassis, which would provide one source of power. Thus, *Henrie* teaches away from the contention of the Official Notice. Therefore, for at least this reason, Applicants respectfully request that the rejections of the pending claims be removed in that the Official Notice relied upon in formulating the rejections is improper. Since none of the art of record is adequate to remedy this deficiency, Applicants respectfully request that the claims be placed in condition for allowance.

Second, *Henrie* does not contemplate moving of a USB hub to the inside of a computer chassis. In this regard, *Henrie* discloses, in relevant part:

FIG. 1a shows the architecture of a universal serial bus repeater 5 which includes a universal serial bus controller 10 connected to a number of outside ports. The universal serial bus controller 10 controls the routing of the signals from the upstream port to the downstream ports and from the downstream ports to the upstream port and error detection and recovery. ***Universal Serial Bus (USB) Port 0 (12) is the universal serial bus upstream port which is typically connected to a host computer. Universal Serial Bus Ports 1 to 7 (18) are universal serial bus downstream ports which are typically connected to universal serial bus devices.*** D+ and D- signify signals which are sent to and from both the upstream and downstream ports. At the connection to the universal serial bus port 0 (12), there is a 5 Volt bus voltage signified as VBUSIN. The VBUSIN voltage is input to the 5 V to 3.3 V Regulator 14, with the output of the regulator being sent to power the universal serial bus controller 10, the fault detect circuit 24, and the power-on reset circuit 17 (i.e., resetting the controller during power-up) (shown in FIG. 5). The universal serial bus controller 10 also has a crystal input (XTAL) 16 which operates at 48 MHz for purposes of timing.

The AC/AC adapter 20 is supplied with power from a typical wall outlet. The output of the AC/AC (20) adapter is 20 Volts AC which is input to a rectifier 22. The output of the rectifier 22 is 30 V rectified which is used to power two switching power supplies 26A, 26B and used as an input to the fault detect circuit 24, described hereinafter. The two switching power supplies 26A, 26B switch the rectified 30 V input to 5 VDC to power the downstream ports 18. In the event that four ports or less are needed downstream of the universal serial bus controller 10, only one switching power supply 26A is necessary. In an alternative embodiment, a single high current switching power supply may be used in place of the two switching power supplies 26A, 26B to power all seven downstream ports. The fault detect circuit 24 connects to the universal serial bus controller 10 and the two switching power supplies 26A, 26B.

In an alternative embodiment, the AC/AC adapter 20 is replaced with an AC/DC adapter. The AC/DC adapter is supplied with power from a typical wall outlet and provides 5 VDC at 4 Amps. In addition, the Switching Power Supplies 26A and 26B are replaced by a linear regulator, similar to the regulator as shown in FIG. 7 except with higher current capabilities and with an ON/OFF switch. The fault detect circuit, as shown in FIG. 3, with the OFF/ON output is inverted and connected to the ON/OFF switch of the linear regulator. In particular, the fault detect circuit is modified so that R59, as shown in FIG. 4, is changed from connection to pin6.sub.-- 2 to the connection to the 5 V OUT of the linear regulator (pin 1 of the linear regulator). A resistor is added from the transistor side of R59, as shown in FIG. 4, to ground, providing a voltage divider to measure the voltage out of 5 V OUT.

(*Henrie* at column 4, line 65 to column 5, line 51). (Emphasis added).

Based on the foregoing, two additional and distinct aspects of the teachings of *Henrie* are evident. That is, this portion of *Henrie* demonstrates that the repeater has external USB ports for connecting to peripheral or external devices. Further, the manner of powering the repeater (e.g., using wall outlet power) is not consistent with a device that is mounted within a computer chassis. Thus, *Henrie* does not contemplate moving of a USB hub to the inside of a computer chassis as contended in the Official Notice. Therefore, for at least this reason, Applicants respectfully request that the rejections of the pending claims be removed in that the Official Notice relied upon in formulating the rejections is improper. Since none of the art of record is adequate to remedy this deficiency, Applicants respectfully request that the claims be placed in condition for allowance.

Third, *Henrie* clearly discloses that when the disclosed USB repeater is moved within a peripheral (e.g., a computer monitor), the external USB ports are still used as external USB ports. In this regard, *Henrie* discloses, in relevant part:

As shown in FIG. 9b, the compound universal serial bus repeater 66 includes a universal serial bus controller 10 and a universal serial bus interface 67. An example of a universal serial bus device that performs both functions of a controller and an interface is the Texas Instruments TUSB2140 4-port device with Inter-Integrated Circuit (I2C) bus circuitry. The I2C bus circuitry serves as the universal serial bus interface 67, that can be used to control a PC monitor. The universal serial bus interface 67 (using the Inter-Integrated Circuit (I2C)) allows control of the monitor's brightness, contrast, vertical/horizontal hold as well as other operating characteristics of the monitor. ***Port0 of the compound universal serial bus repeater 66 is connected to a universal serial bus port of a universal serial bus computer 68.*** The universal serial bus computer 68 is a standard computer with a universal serial bus port. Further, ***downstream ports on the compound universal serial bus repeater 66 can be connected to other external devices, such as a mouse and an external video. The external devices, in turn, may be compound universal serial bus devices so that the universal serial bus devices may be daisy-chained together.***

(*Henrie* at column 13, lines 4 - 24). (Emphasis added).

Based on the foregoing, there is no contemplation in *Henrie* of using external USB ports of the disclosed device as internal USB ports as suggested in the contention of the Official Notice. Therefore, for at least this reason, Applicants respectfully request that the rejections of the pending claims be removed in that the Official Notice relied upon in formulating the rejections is improper. Since none of the art of record is adequate to remedy this deficiency, Applicants respectfully request that the claims be placed in condition for allowance.

In contrast to the required standard for Official Notice that requires facts “capable of instant and unquestionable demonstration as being well known,” the Office Action itself provides teachings that are contrary to the contentions in the Official Notice. Therefore, for at least this reason, Applicants respectfully request that the rejections of the pending claims be removed in that the Official Notice relied upon in formulating the rejections is improper. Since none of the art of record is adequate to remedy this deficiency, Applicants respectfully request that the claims be placed in condition for allowance.

Finally, if such Official Notice is to be maintained, Applicants challenge such a finding as set forth above and respectfully request (pursuant to MPEP 2144.03.C) that the Examiner support such Official Notice with documentary evidence. In the absence of such evidence, Applicants respectfully assert that the Official Notice alleged in the Office Action is deficient and, thus, improper for rejection the pending claims. Therefore, Applicants respectfully request that the claims be placed in condition for allowance.

Cited Art Made of Record

The cited art made of record has been considered, but is not believed to affect the patentability of the presently pending claims.

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

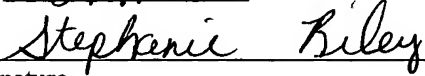
Respectfully submitted,



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